hearing sad news. It is the condition which the prize-fighter desires to inflict upon his adversary by giving what is called the “ knock-out blow ” upon the point of the jaw, over the heart or in the lower part of the chest.

In severe shock the individual falls “all of a heap,” as the saying is, which is exactly expressed by the word “ collapse ” *(collapsus, collabor,* fall in ruins). The explanation of the con­dition is that the heart is suddenly deprived of its power to pump blood up to the brain which, like the face itself, is left anaemic and has no power to send out control to the muscles. The blood at once sinks into, and remains stagnant in, the large veins of the abdomen. And inasmuch as the condition of collapse is due to anaemia of the brain, it is met with in those cases in which a sudden and serious loss of blood has been sustained, as in the “ flooding ” of child-bed, the giving way of an aneurism, or the opening of some large blood-vessel. It may also supervene on the rupture of a gastric ulcer, and is then the result of the injury to which the network of nerves in the interior of the abdomen has been subjected by the sudden escape on to them of the contents of the stomach.

In severe shock the patient is pale, and bathed in clammy perspiration; his sensibility is blunted; his pulse is small and weak, sometimes, indeed, it is imperceptible, and even on laying the hand over the heart no cardiac impulse may be felt. The person is unable to make any exertion, but lies indifferent to external circumstances, and can be roused only with difficulty or not at all. He complains of a feeling of cold, and he may have a distinct shivering. These symptoms may continue for some hours. The first evidence of improvement is that he shifts his position, becomes restless and complains of the injury. Perhaps he vomits. The pulse becomes stronger, and he then passes from the state of shock into that of reaction. If the improvement continues, recovery takes place; but if it is only transient, he sinks back again into a drowsy condition, which may end in death, for it must be clearly understood that shock may end fatally. Sometimes there is no rallying, death following the injury immediately. In cases where there is no reaction, the patient gradually becomes weaker, and his pulse feebler, till death ensues. Shock is due to an impression conveyed to the medulla oblongata, by which the nerve-centres are so affected that a partial paralysis of the voluntary and involuntary muscular fibres in the body takes place, the patient being, perhaps, unable to lift his arm or move his leg. The respiratory functions are performed wearily, and the muscle of the heart contracts feebly. The walls of the blood-vessels lose their tonicity and the vessels dilate, the blood collecting in the large venous trunks, more especially of the abdomen. The vessels of the skin being emptied of blood, marked pallor ensues. The heart beats feebly because its nervous energy is Iowered, and because it has not a sufficient quantity of blood upon which to act. An understanding of these facts gives the general indications for treatment, which comprise external stimulation over the heart by mustard poultices or turpentine stupes; elevation of the limbs—to cause the blood to gravitate towards the heart, and so to the brain; manual pressure on the abdominal cavity from below upwards—to encourage the flow of blood from the overloaded abdominal veins into the heart. In urgent cases an injection may be given into the veins of warm water in which table salt (6o grains to a pint) is dissolved. These different measures may be supple­mented by the administration of stimulants by the mouth, or, if the patient cannot swallow, by subcutaneous injection of brandy, ether or a solution of strychnine. In all probability many men have been left for dead upon the field of battle who were only in a state of extreme collapse; in the future many such cases will be saved by the prompt injection of ether over the region of the heart.

In syncope from mental emotion the weakened heart cannot drive a sufficient quantity of blood to the brain; the patient feels dizzy and faint, and falls down insensible. The condition is transitory and the recumbent posture, assisted if need be by elevation of the limbs, causes the blood to gravitate to the heart, which is thereby stimulated to contract. A sufficient quantity

of blood is then driven to the brain, and the insensibility passes off. If the patient is in the sitting posture when he feels faint, the head should be depressed between the knees, which will cause the blood to flow to the brain, and the faintness will pass off. Otherwise he should be laid flat on his back, his head being kept low. When a collapsed person is put to bed, no pillow should be allowed, and the foot of the bed should be raised above the level of the head. (E. O.\*)

**SHODDY,** in origin probably a factory term and first applied to the waste thrown off or “ shed ” during the process of wool manufacture. It is now the name given to a special type of fabric made from re manufactured materials, *i.e.* materials which have already been spun into yam and woven into cloth but have been tom up or “ ground up ”—as this operation is termed technically—into a fibrous mass, and respun and rewoven. The term “ shoddy ” is sometimes applied to all fabrics made of such remanufactured materials, of which there are many types, such as “ mungos,” “ extracts,” “ flocks,” &c., but strictly it should be confined to a cloth produced from fabrics originally made from English and the longer cross-bred wools. Mungo is produced from fabrics originally made from Botany and short fine wools; extract is the wool fibre obtained from goods origin- ally composed of wool and cotton from which the cotton has been “extracted” by sulphuric acid or some other agent; and flocks mostly come from milling, raising and cropping machines. There are some few other particular types of minor importance.

The operations of converting rags, tailors’ clippings, &c., into these remanufactured materials are as follows: dusting, to render the subsequent operations as healthy and agreeable as possible; seaming *i.e.* taking out every little bit of sewing thread (unless the rags are for extracting) in order that a good “spin” may result; sorting into the various qualities and colours; oiling, to cause the fibres to glide upon one another, and thus separate so far as possible without breakage; and finally grinding, *i.e.* tearing up into a fibrous mass which may be readily spun into threads. The last-named operation is usually spoken of as “ grinding, ” but really it is anything but grinding, being more of a teasing-out operation, the object béing to preserve the length of the fibre so far as possible. The remanu- factured materials are necessarily very short in fibre, so that it is usually necessary to mix, *Le.* “ blend,” some better material with them to carry the bulk through the machines into the yarn. With this object in view, sometimes good wool or noils (the short from combing), but more often cotton, is employed. The yarns thus spun are in the majority of cases woven into pieces as weft yarns, the warps usually being cotton; but there arc some exceptions, a really good mungo blend being readily woven as warp.

Upon the whole the “ cheap and nasty ” idea usually associated with the term “ shoddy,” in reference to these remanufactured materials, is quite a mistake. Some most excellent cloths are produced, and when price is taken into consideration it must be conceded that the development of this industry has benefited the working classes of Great Britain and other countries to a remarkable extent. Many are now well clothed, who, without the advent of the remanufactured materials, would have been clothed in rags.

**SHOE (a** word appearing in the Teutonic languages in various forms, as Ger. *Schuh,* Swed. and Dan. *sko,* sometimes supposed to come from an unknown root *ska* or *sku,* cover), a covering for the foot. The simplest foot-protector is the sandal, which consists of a sole attached to the foot, usually by leather thongs. The use of this can be traced back to a very early period; and the sandal of plaited grass, palm fronds, leather or other material still continues to be the most common foot-covering among oriental races. Where climate demanded greater protection for the foot, the primitive races shaped a rude shoe out of a single piece of untanned hide; this was laced with a thong, and so made a complete covering. Out of these two elements— sole without upper and upper without sole—arose the perfected shoe and boot, consisting of a combination of both. The boot